IN THE CLAIMS

1 (Currently Amended). A multiprocessor device comprising:

[[a]] at least three interconnected optical transceivers ~~processors~~ for direct communication between said ~~processors~~ transceivers; and

at least three processors, each processor ~~an optical transceiver~~ coupled to ~~each processor~~ one transceiver, each ~~said~~ transceiver including a wavelength division multiplexer to enable optical communications with the other processors, each ~~wherein said~~ transceiver to notify a first of the three transceivers ~~processors~~ when a second of the three transceivers ~~processors~~ is receiving a signal from a third of the three ~~processors~~ transceivers.

2 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical transmitter including a laser.

3 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical receiver tunable to a particular input wavelength.

4 (Currently Amended). The device of claim 1 wherein each transceiver ~~processor~~ is assigned a wavelength for communicating with the other processors.

Claims 5 and 6 (Canceled).

7 (Currently Amended). The device of claim 1 wherein said transceiver ~~coupler~~ includes a [[an]] dispersive element to disperse light reflected by said reflector.

8 (Previously Presented). The device of claim 7 wherein said dispersive element includes a microelectromechanical structure.

9 (Previously Presented). The device of claim 1 wherein each transceiver transmits a light beam together with a code identifying a sending and a receiving processor.

10 (Currently Amended). The device of claim 1 wherein, when one transceiver ~~processor~~ is receiving a wavelength division multiplexed signal from another ~~processor~~ transceiver, the one transceiver ~~processor~~ broadcasts to all other transceivers ~~processors~~ that the one transceiver ~~processor~~ is busy.

11 (Currently Amended). A method comprising:

establishing a multiprocessor device including at least three directly interconnected ~~processors~~ systems, each system including a processor and an optical transceiver;

enabling optical communications between said systems ~~processors~~ using wavelength division multiplexing; and

notifying a first system ~~processor~~ when a second system ~~processor~~ is receiving an optical communication from a third ~~processor~~ system.

12 (Original). The method of claim 11 including assigning a unique wavelength to each of said processors.

13 (Original). The method of claim 11 including scanning for the wavelengths of any of said other processors.

14 (Currently Amended). The method of claim 13 including transmitting a light beam having a predetermined wavelength, and transmitting a code that identifies the transmitting system ~~processor~~ and the intended receiving ~~processor~~ system.

15 (Currently Amended). The method of claim 14 wherein the receiving system ~~processor~~ identifies the wavelength of the incoming beam and the code accompanying said beam, and locks to the wavelength of the transmitting ~~processor~~ system.

Claim 16 (Canceled).

17 (Currently Amended). The method of claim 15 including broadcasting the fact that the second system ~~processor~~ is receiving a beam to all other systems ~~processors~~ in the device.

18 (Currently Amended). The method of claim 17 indicating when said second system ~~processor~~ is no longer communicating with said third ~~processor~~ system.

19 (Currently Amended). The method of claim 11 including using a code transmitted by the third system ~~processor~~ to determine if a given system ~~processor~~ is the intended recipient of a beam transmitted from the third ~~processor~~ system.

20 (Currently Amended). The method of claim 11 including optically interconnecting each of said ~~processors~~ systems.

21 (Currently Amended). A computer readable ~~An article comprising a~~ medium storing instructions that enable a first processor-based system of a multiprocessor-based device including a second processor-based system and a third processor-based system to:

identify a light communication from a second processor-based system intended for said first processor-based system;

tune to said wavelength; and

notify a first processor when a second processor is receiving an optical communication from a third processor.

22 (Currently Amended). The medium ~~article~~ of claim 21 further storing instructions that enable the first processor-based system to scan through a plurality of wavelengths of other processor-based systems to identify a signal intended for said first processor-based system.

23 (Currently Amended). The medium ~~article~~ of claim 21 further storing instructions that enable the first processor-based system to receive a code that indicates whether a given light communication is intended to be sent to said first processor-based system.

24 (Currently Amended). The medium ~~article~~ of claim 23 further storing instructions that enable said first processor-based system to tune to said wavelength to the exclusion of other wavelengths.

25 (Currently Amended). The medium ~~article~~ of claim 24 further storing instructions that enable said first processor-based system to broadcast a signal indicating that said first processor-based system is tuned exclusively to said wavelength.

26 (Currently Amended). The medium ~~article~~ of claim 25 further storing instructions that enable the first processor-based system to notify a third processor-based system when said first processor-based system is no longer engaged in a communication with said second processor-based system.

27 (Currently Amended). The medium ~~article~~ of claim 21 further storing instructions that enable said first processor-based system to identify a second processor-based system to communicate with and to determine whether said second processor-based system is currently occupied with a communication with another processor-based system.

28 (Currently Amended). The medium ~~article~~ of claim 21 further storing instructions that enable said first processor-based system to communicate with at least two other processor-based systems using optical communications and wavelength division multiplexing.

29 (Currently Amended). The medium ~~article~~ of claim 28 further storing instructions that enable said first processor-based system to communicate with other processor-based systems using an assigned wavelength.

30 (Currently Amended). The medium ~~article~~ of claim 29 further storing instructions that enable said first processor-based system to transmit a code that identifies said first processor-based system and an intended receiving processor-based system.